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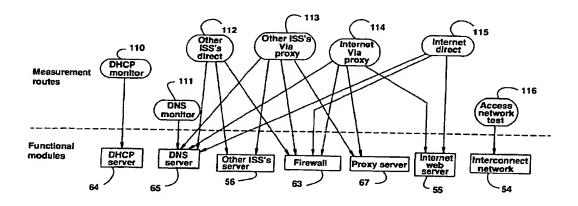
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(54) Method and system for managing data service systems

(57) A scheme is described for a data service system (50) having a number of modules (51, 54-56, 61-67). Some of the modules (51, 54-56, 61-67) are interdependent. To measure the status of an individual module, the scheme first collects measurements from a number of measurement routes (110-116) that involve the module. Then the scheme analyzes the interdependencies of the measurements to determine the status of the individual module. The scheme may also determine status of the data service system (50) with a

minimal number of measurement routes. This is done by determining (1) all possible measurement routes, (2) determining the dependency between the modules and the measurement routes, and (3) analyzing the dependency to select minimal number of the measurement routes. The scheme can diagnose whether a module is a problematic module or not by analyzing a number of measurements that involve the module. If one of the measurements is good, the module is identified as non-problematic.

FIG.7



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EUROPEAN SEARCH REPORT

Application Number EP 98 30 2860

	DOCUMENTS CONSIDERED	TO BE RELEVANT	-	
Category	Citation of document with indication of relevant passages	n, where appropriate.	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.5)
A	US 5 488 715 A (WAINWRIG 30 January 1996 (1996-0) * abstract * * column 1, line 7 - line * column 2, line 19 - column 7, line 13 - l	1-30) ne 15 *	1-10	H04L29/06 H04L12/24
A	APOSTOLOPOULOS T K ET A SNMP BASED PERFORMANCE SERVICES" PROCEEDINGS OF IEEE SIN INTERNATIONAL CONFERENC 3 July 1995 (1995-07-0 * abstract * * page 269, right-hand line 26 * * page 270, left-hand of line 29 * * page 271, left-hand of line 55 *	L: "A MODEL FOR MANAGEMENT GAPORE E ON NETWORKS, 3), XP002041821 column, line 13 - column, line 5 - column, line 13 -	1-10	TECHNICAL FIELDS SEARCHED (INT.CI.6) H04L
<u> </u>	The present search report has been drawn up for all claims Place of search Date of completion of the search			Examiner
	THE HAGUE	10 November 20		dkhis, F
A:t	CATEGORY OF CITED DOCUMENTS varioularly relevant if taken alone varioularly relevant if combined with another locument of the same category echnological background non-written disclosure mermediate occument	T : theory or pri E : earlier pater after the filin D : document of L : document of	nciple underlying to t document, but po g date ited in the applicati ted for other reaso	he invention ublished on, or ion

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 98 30 2860

This annex lists the patent family members relating to the patent documents cited in the above—mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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_	cited in search re		Publication date	Patent family member(s)	Publication date
	US 5488715	Α	30-01-1996	NONE	
			fficial Journal of the Europea		
mo	re details about this an	nex :eas O	fficial lournal of the To		
				an Patent Office, No. 12/82	

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